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Item 16 of the provisional agenda
Collective amendments to Regulations Nos. 14 and 16

Proposal for Supplement 7 to the 06 series of amendments to Regulation No. 14 and Supplement 6 to the 06 series of amendments to Regulation No. 16

Submitted by the expert from the Netherlands*

The text reproduced below was prepared by the experts from the Netherlands to clarify height requirements for the effective upper belt anchorage introduced by the Supplement 4 to the 07 series of amendments to Regulation No. 14. This text is based on informal document GRSP-56-19 distributed during the fifty-sixth session of the Working Party on Passive Safety (GRSP). The modifcations to the current text of the UN Regulations Nos. 14 and 16 are marked in bold for new or strikethrough for deleted characters.

* In accordance with the programme of work of the Inland Transport Committee for 2012–2016 (ECE/TRANS/224, para. 94 and ECE/TRANS/2012/12, programme activity 02.4), the World Forum will develop, harmonize and update Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.

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I. Proposal for Supplement 7 to the 06 series of amendments to Regulation No. 14 (Safety belt anchorages)

Paragraph 5.4.3.6.1., amend to read:

"5.4.3.6.1. Notwithstanding … are met:

(a) The safety belt ...

…

(d) The manufacturer … of short stature.

However where the device for adjusting the height is not directly attached to the vehicle construction or seat construction, but is realized by means of a flexible adjustment device for height:

(e) the requirements mentioned in the subparagraphs (a) and (d) above shall still be fulfilled as part of the Regulation No.14 type approval making use of the restraint system that is to be installed.

(f) evidence is needed that the safety-belt together with its flexible adjustment for height complies with the requirements for restraint systems of Regulation No. 16; the requirements in the subparagraphs (b) and (c) shall be fulfilled under paragraph 8.3. of Regulation No. 16 type approval."

II. Proposal for Supplement 6 to the 06 series of amendments to Regulation No. 16 (Safety-belts)

Paragraph 2.14.6., amend to read:

"2.14.6. Belt adjustment device for height

A device enabling the position in height of the upper pillar loop **(directly connected to the vehicle or the rigid seat structure)** of a belt to be adjusted according to the requirements of the individual wearer and the position of the seat. Such a device may be considered as a part of the belt or a part of the anchorage of the belt."

Insert a new paragraph 2.14.7., to read:

"2.14.7. "Flexible adjustment device for height"

A device for adjusting to the height of the individual wearer, where the adjusting part is not directly attached to the vehicle construction (e.g. pillar) or the seat construction (e.g. the rigid seat structure)."

Paragraph 6.4.1.2.3., amend to read:

"6.4.1.2.3. In the case of a belt intended for use with a belt adjustment device for height, as defined in paragraph 2.14.6. above, the test shall be carried out with the device adjusted in the most unfavourable position(s) chosen by the Technical Service responsible for testing. However:

6.4.1.2.3.1. if the belt adjustment device for height is constituted by the belt anchorage, as approved in accordance with the provisions of Regulation No. 14, the Technical Service responsible for testing may, at its discretion, apply the provisions of paragraph 7.7.1. below;

Insert new paragraph 6.4.1.2.3.2., to read:

"**6.4.1.2.3.2. if a flexible adjustment device for height is part of the belt, it shall be tested as a restraint system and the Technical Service responsible for testing shall apply the provisions under paragraph 7.7.1. that count for testing on the part of the vehicle structure to which the restraint system is normally fitted.**"

Paragraph 6.4.2.2., the table, amend to read:

"6.4.2.2. The parts of the ... A new sample shall be used for each procedure.

	Procedure 1	*Procedure 2*	*Procedure 3*
Attachment	-	-	x
Guide or Pulley	-	x	-
Buckle-loop	-	x	x
Adjusting device	x	-	x
Parts sewn to the strap	-	-	x
Flexible shoulder adjusting device for height	x	-	-

"

Paragraph 8.1.1., amend to read:

"8.1.1. With the exception of…

…

Class I, or A … of this Regulation.

Only vehicles belonging to category M_2 or M_3 may be fitted with restraint systems comprising a flexible shoulder adjustment device for height (paragraph 2.14.7.)."

Paragraph 8.3.3., amend to read:

"8.3.3. When the … vehicle seat.

A manual adjustment device shall be so designed to prevent any unintended movement that would reduce the effectiveness of the device during normal use."

Annex 1B, item 1, amend to to read:

"1. Restraint system (with)/three-point belt/lap belt/special type belt/fitted (with) energy absorber/retractor/device for height adjustment of the upper pillar loop/**flexible adjustment device for height** [3] ....."

III. Justification

1. In the approval certificate of UN Regulation No. 16, where strikethrough options are required, only one system for "belt adjustment for height" can be mentioned, namely the "belt adjustment for height of the upper-pillar loop".

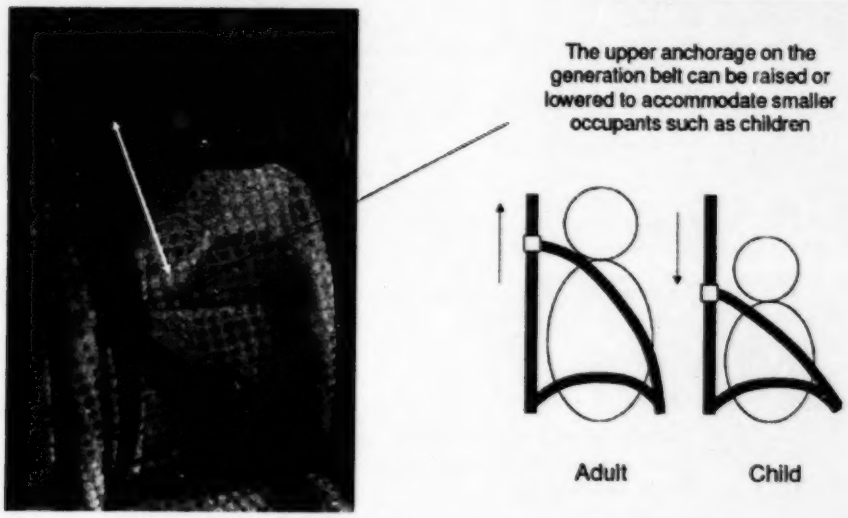
[3] Indicate which type.

2. The situation explained above has caused confusion so far: a belt/restraint system that makes use of **a flexible shoulder adjustment device for height** (sometimes called **generation belt,** see the explaining figure on next page), does not make use of the upper-pillar loop for adjustment and therefore cannot be mentioned on the Communication form.

3. Accordingly, authorities (responsible for the installation approval of a belt in a vehicle (Communication sheet 1A)) did not always react, by means of the Regulation No. 16 (Annex 1B) to a restraint system concerning a belt system with a flexible shoulder adjustment device for height! Note that this kind of belt system could have a location of the effective upper anchorage lower than the limit of 450 mm above the R-point, only in the case of installation on M_2 and M_3 vehicles (this is stated up to now only in UN Regulation No. 14 because the focus was merely on adjustable upper-pillar loops)!

4. This proposal introduces a definition for flexible shoulder adjustment device for height the situation will be clarified.

5. Moreover, the complexity and sensibility of the flexible adjustment device for height (generation belts) does not justify a dynamic test according to UN Regulation No. 16, which provides a generic stiff seat. A test proposal for a restraint system (in combination with a real vehicle seat) is shown below:


The upper anchorage on the generation belt can be raised or lowered to accommodate smaller occupants such as children
Adult
Child

***Source*: this figure was in doc. GRSP-50-23 tabled by the expert from Germany.**